

Advanced Java Lab

Week-8

Roll Number: 238W1A12C4

1. Create and manage a Spring Boot project using Maven.

Code:

Step 1 — Open STS

Launch Spring Tool Suite.

Step 2 — Create New Spring Boot Project

1. Go to:

File → New → Spring Starter Project

2. Fill the details:

Field	Value
Name	demo
Type	Maven Project
Packaging	Jar
Java Version	17
Group	com.example
Artifact	demo

Step 3 — Select Dependencies

Choose at least:

- **Spring Web**

Click **Finish**.

STS will generate a full Maven Spring Boot project.

Step 4 — Project Structure Explanation

After generation, STS creates:

demo

- src/main/java → Application + Controllers + Code
- src/main/resources → application.properties + static files
- pom.xml → Maven build file
- src/test/java → Test classes

DemoApplication.java:

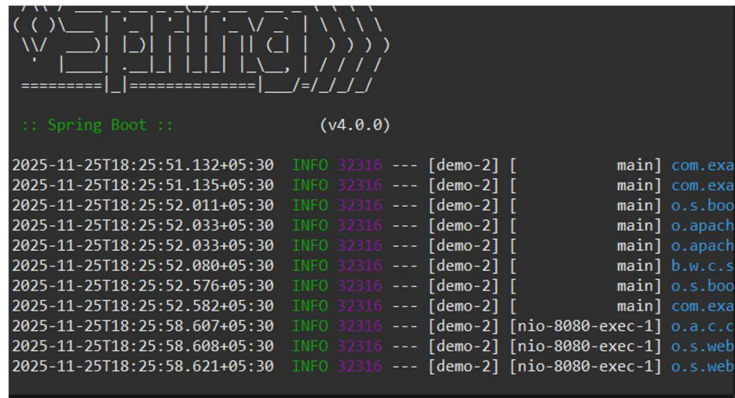
```
@SpringBootApplication
public class DemoApplication {
    public static void main(String[] args) {
```

```

        SpringApplication.run(DemoApplication.class, args);
    }
}

```

Output:



```

:: Spring Boot ::                (v4.0.0)

2025-11-25T18:25:51.132+05:30 INFO 32316 --- [demo-2] [main] com.exa
2025-11-25T18:25:51.135+05:30 INFO 32316 --- [demo-2] [main] com.exa
2025-11-25T18:25:52.011+05:30 INFO 32316 --- [demo-2] [main] o.s.boa
2025-11-25T18:25:52.033+05:30 INFO 32316 --- [demo-2] [main] o.apach
2025-11-25T18:25:52.033+05:30 INFO 32316 --- [demo-2] [main] o.apach
2025-11-25T18:25:52.080+05:30 INFO 32316 --- [demo-2] [main] b.w.c.s
2025-11-25T18:25:52.576+05:30 INFO 32316 --- [demo-2] [main] o.s.boa
2025-11-25T18:25:52.582+05:30 INFO 32316 --- [demo-2] [main] com.exa
2025-11-25T18:25:58.607+05:30 INFO 32316 --- [demo-2] [nio-8080-exec-1] o.a.c.c
2025-11-25T18:25:58.608+05:30 INFO 32316 --- [demo-2] [nio-8080-exec-1] o.s.web
2025-11-25T18:25:58.621+05:30 INFO 32316 --- [demo-2] [nio-8080-exec-1] o.s.web

```

2. Add dependencies and explore the application.properties file.

Code:

Pom.xml:

```

<dependencies>

    <!-- Spring Web -->
    <dependency>
        <groupId>org.springframework.boot</groupId>
        <artifactId>spring-boot-starter-web</artifactId>
    </dependency>

    <!-- H2 Database -->
    <dependency>
        <groupId>com.h2database</groupId>
        <artifactId>h2</artifactId>
        <scope>runtime</scope>
    </dependency>

    <!-- Testing -->
    <dependency>
        <groupId>org.springframework.boot</groupId>
        <artifactId>spring-boot-starter-test</artifactId>
        <scope>test</scope>
    </dependency>

</dependencies>

```

application.properties:

server.port=8081

Enable H2 Console

spring.h2.console.enabled=true

H2 DB Configuration

spring.datasource.url=jdbc:h2:mem:testdb

spring.datasource.username=sa

spring.datasource.password=

Show SQL queries

spring.jpa.show-sql=true

spring.jpa.hibernate.ddl-auto=update